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*Extended Abstract*

## **The Teleodynamics of Culture, Language, Organization, Science, Economics and Technology (CLOSET)**

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### **Extended Abstract**

The following passage of *Incomplete Nature* raised the following question in my mind are culture, language, organization science, economics, technology (CLOSET) teleodynamic phenomena?

Teleodynamics can be understood as characterizing the distinguishing dynamics of life. However, rather than being an abstract description of the properties that living processes exhibit, it is a specific dynamical form that can be described in quasi-mechanical terms. Although it is the distinguishing characteristic of living processes, it is not necessarily limited to the biological. Teleodynamic processes can be identified with respect to the specific end-directed attractor dynamics they develop toward.

So why do I think that culture, language, organization, science, economics and technology (CLOSET) represent teleodynamic processes? I believe that they are autonomous agents that maintain themselves, self-organize, and seem to have agency? They are obligate symbionts and hence their energy is provided by their hosts, us humans, but they assist their hosts acquire energy and do work.

The elements of CLOSET parallel the processes of living organisms they also undergo a parallel form of Darwinian evolution of descent, modification and selection. And like living organisms they have a telos in that they fit Deacon's definition of a teleodynamic system in that they are "self-creating, self-maintaining, self-reproducing, individuated systems". Morten Christiansen (1994) has argued that human language can be "construed" as an organism that evolved to be easily learned. Terrence Deacon (1997) in his book *The*

*Symbolic Species* makes a similar argument. In my book *The Extended Mind: The Emergence of Language, the Human Mind and Culture* (Logan 2007) I have argued that not only language, but also culture can be construed as organisms that evolve and reproduce themselves.

Deacon argues that “The incessant need to replace and reconstruct organism components depends on synthetic form-generating processes, not merely resistance to breakdown (ibid., 276).” The individual members of CLOSET also in a certain sense replace and reconstruct their components through form-generating processes (new Cultural practices through technological change, diffusion, acculturation; new words added to a Language through grammaticalization, portmanteau or neologisms; new Organizational models; new Scientific paradigms developed in what Kuhn terms revolutionary science respectively; new Economic models and Technological breakthroughs through invention, innovation and diffusion respectively). Like living organisms the individual members of CLOSET are also self-correcting and self-maintaining.

The claim that the individual members of CLOSET are teleodynamic systems suggests that these six species are self-creating, self-maintaining and self-reproducing respectively. Language reproduces itself and came into being by self-organizing the signals used by individuals into a system of communication that can be easily learned and hence reproduced by imitation. This mechanism also insures the self-maintenance of the system as the use of expressions that do not maintain the integrity of the system will not be imitated and hence discarded. Culture follows a similar pattern. The cultural practices that are easy to learn and insure the survival of the society in the environment in which they operate self-organize and self create the culture. Practices that ran counter to norms of society and which were inconsistent with the demands of the environment quickly die out and hence culture self-maintains itself. Technologies and tools that aid the survival of a society self-organize and survive, but those that do not aid survival of their hosts do not themselves survive. Science by its very nature is a self-maintaining activity as theories inconsistent with the observation of nature will be eventually detected and discarded. Economic and organizational practices that promote the well being of a society self-maintain and self-repair themselves.

Culture, Language, Organizations, Science, Economics and Technology are activities that behave like living organisms that self-created themselves and behave like living organisms that self-regulate, self-reproduce themselves, self-correct and self-maintain themselves with the one exception that as obligate symbionts they depend on their human hosts for energy.

In conclusion the analogy between living organisms and the individual members of CLOSET consists of the following points:

- all propagate their organization;
- all evolve through descent, modification and selection;
- all are emergent phenomena;
- all arise from self-organization and catalytic closure; and
- all have a form of instructional information or constraints.